

Patente Marken u. Lizenzen

18. April 2005

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PCT

NOTIFICATION CONCERNING  
SUBMISSION OR TRANSMITTAL  
OF PRIORITY DOCUMENT

(PCT Administrative Instructions, Section 411)

To:

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Date of mailing (day/month/year) 08 April 2005 (08.04.2005)	IMPORTANT NOTIFICATION
Applicant's or agent's file reference 0000055383	
International application No. PCT/EP05/001759	International filing date (day/month/year) 19 February 2005 (19.02.2005)
International publication date (day/month/year)	Priority date (day/month/year) 26 February 2004 (26.02.2004)
Applicant BASF AKTIENGESELLSCHAFT et al	

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<u>Priority date</u>	<u>Priority application No.</u>	<u>Country or regional Office or PCT receiving Office</u>	<u>Date of receipt of priority document</u>
26 February 2004 (26.02.2004)	10 2004 009 940.5	DE	14 March 2005 (14.03.2005)

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# INTERNATIONAL SEARCH REPORT

International Application No

PCT/EP2005/001759

## A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C09D11/00

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 C09D

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the International search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,X	EP 1 457 534 A (KIWA CHEMICAL INDUSTRY CO., LTD) 15 September 2004 (2004-09-15) claims; examples	1-10
P,X	WO 2004/031255 A (BASF AKTIENGESellschaft; KRUEGER, CHRISTIAN; HEES, ULRIKE; VAN GELDER,) 15 April 2004 (2004-04-15) example 4	1-10
X	EP 1 020 499 A (SEIKO EPSON CORPORATION) 19 July 2000 (2000-07-19) paragraph '0013! - paragraph '0024!; examples	1-10
X	US 4 689 078 A (KOIKE ET AL) 25 August 1987 (1987-08-25) examples 2,3	1-10
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☒ Further documents are listed in the continuation of box C.

☒ Patent family members are listed in annex.

\* Special categories of cited documents:

- \*A\* document defining the general state of the art which is not considered to be of particular relevance
- \*E\* earlier document but published on or after the international filing date
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- \*O\* document referring to an oral disclosure, use, exhibition or other means
- \*P\* document published prior to the international filing date but later than the priority date claimed

- \*T\* later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
- \*X\* document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
- \*Y\* document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art.
- \*&\* document member of the same patent family

Date of the actual completion of the international search

14 April 2005

Date of mailing of the international search report

22/04/2005

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## INTERNATIONAL SEARCH REPORT

International Application No  
PCT/EP2005/001759

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	EP 1 156 086 A (SEIKO EPSON CORPORATION) 21 November 2001 (2001-11-21) claims; examples -----	1-10
X	EP 1 234 859 A (SEIKO EPSON CORPORATION) 28 August 2002 (2002-08-28) cited in the application paragraph '0012! - paragraph '0014!; examples paragraph '0035! - paragraph '0036! -----	1-10
X	EP 1 333 048 A (AIR PRODUCTS AND CHEMICALS, INC) 6 August 2003 (2003-08-06) cited in the application paragraph '0029!; claim 16 -----	1-10
X	WO 03/052009 A (KIWA CHEMICAL INDUSTRY CO., LTD; MAEKAWA, SHUNJI; TANAKA, HIROKI) 26 June 2003 (2003-06-26) the whole document -----	1-10
X	PATENT ABSTRACTS OF JAPAN vol. 2003, no. 09, 3 September 2003 (2003-09-03) & JP 2003 128962 A (TORAY IND INC), 8 May 2003 (2003-05-08) abstract -----	1-10
X	PATENT ABSTRACTS OF JAPAN vol. 012, no. 444 (C-545), 22 November 1988 (1988-11-22) & JP 63 168477 A (MITSUBISHI KASEI CORP), 12 July 1988 (1988-07-12) abstract -----	1-10
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Information on patent family members

International Application No

PCT/EP2005/001759

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New claims:

1. An aqueous recording fluid comprising
  - 5 (a) at least one colorant which is not completely polymer enveloped, selected from those colorants in particulate form where some colorant particles are completely polymer enveloped and others only incompletely, and those colorants in particulate form wherein some colorant particles are completely polymer enveloped and others not at all,
  - 10 (b) at least two wetting agents selected from alkoxylated alcohols of the formula  $R^1O(AO)_xH$ , where  $R^1$  is  $C_1$ - $C_{30}$ -alkyl wherein one or else two nonadjacent  $CH_2$  groups may be replaced by oxygen and wherein  $C_1$ - $C_{30}$ -alkyl may be unsubstituted or substituted with one or two hydroxyl groups, AO represents alkylene oxide, selected from ethylene oxide, propylene oxide and butylene oxide and x is an integer from 1 to 100, alkoxylated acetylene alcohols, alkoxylated or nonalkoxylated acetylenediols, alkylpolyglucosides, sugar ester alkoxylates, fluorosurfactants, anionic surfactants and cationic surfactants.
- 20 2. An aqueous recording fluid comprising
  - (a) at least one colorant in which at least 0.1% by weight of the colorant particles are not completely polymer enveloped,
  - (b) at least two wetting agents selected from alkoxylated alcohols of the formula  $R^1O(AO)_xH$ , where  $R^1$  is  $C_1$ - $C_{30}$ -alkyl wherein one or else two nonadjacent  $CH_2$  groups may be replaced by oxygen and wherein  $C_1$ - $C_{30}$ -alkyl may be unsubstituted or substituted with one or two hydroxyl groups, AO represents alkylene oxide, selected from ethylene oxide, propylene oxide and butylene oxide and x is an integer from 1 to 100, alkoxylated acetylene alcohols, alkoxylated or nonalkoxylated acetylenediols, alkylpolyglucosides, sugar ester alkoxylates, fluorosurfactants, anionic surfactants and cationic surfactants.
- 35 3. The recording fluid according to claim 1 or 2, comprising (c) at least one dispersant.
4. The recording fluid according to at least one of claims 1 to 3, comprising two wetting agents (b1) and (b2) whose weight ratio is in the range from 1 : 20 to 20 : 1.
- 40 5. The recording fluid according to at least one of claims 1 to 4, comprising up to 2% by weight of (b), based on the total weight of the recording fluid.

AMENDED SHEET

6. The recording fluid according to at least one of claims 1 to 5, comprising (d) at least one binder.
- 5 7. A process for producing a recording fluid according to claim 1 to 6, which comprises mixing
- 10 (a) at least one colorant which is not completely polymer enveloped, selected from those colorants in particulate form where some colorant particles are completely polymer enveloped and others only incompletely, and those colorants in particulate form wherein some colorant particles are completely polymer enveloped and others not at all,
- 15 (b) at least 2 wetting agents selected from alkoxylated alcohols of the formula  $R^1O(AO)_xH$ , where  $R^1$  is  $C_1$ - $C_{30}$ -alkyl wherein one or else two nonadjacent  $CH_2$  groups may be replaced by oxygen and wherein  $C_1$ - $C_{30}$ -alkyl may be unsubstituted or substituted with one or two hydroxyl groups, AO represents alkylene oxide, selected from ethylene oxide, propylene oxide and butylene oxide and x is an integer from 1 to 100, alkoxylated acetylene alcohols, alkoxylated or nonalkoxylated acetylenediols, alkylpolyglucosides, sugar ester alkoxylates, fluorosurfactants, anionic surfactants and cationic surfactants,
- 20 (c) if appropriate at least one dispersant,
- (d) if appropriate at least one binder,
- (e) water and
- 25 (f) if appropriate further assistants
- with each other in one or more steps.
8. The use of a recording fluid according to claim 1 to 6 or of a recording fluid produced according to claim 7 as an ink for the ink jet process.
- 30 9. The process for printing substrates by the ink jet process using a recording fluid according to at least one of claims 1 to 6 or of a recording fluid produced according to claim 7.
- 35 10. The process according to claim 9 when the substrates are textile substrates.
11. A printed substrate obtainable by a process according to claim 9 or 10.